

REMARKS

This amendment responds to the office action mailed July 11, 2005. In the office action the Examiner:

- rejected claims 1-28 as being indefinite under 35 U.S.C. 112, second paragraph;
- rejected claims 1-28 under 35 U.S.C. 101 as the claimed invention is directed to non-statutory subject matter;
- rejected claims 1-7, 9-17 and 22-26 under 35 U.S.C. 103(a) as being unpatentable over Page (US 6,285,999) and Kleinberg (US 6,112,202); and
- rejected claims 8, 18-21 and 27-28 under 35 U.S.C. 103(a) as being unpatentable over Page and Kleinberg and further in view of Gabriel et al. (US 6,584,468).

After entry of this amendment, the pending claims are: claims 1-30.

Remarks Concerning Formal Drawings

Formal drawings were submitted at the time of filing of this application. For the Examiner's convenience, an additional copy of the drawings as filed are included with this Amendment.

Detailed Response to 35 U.S.C. 112

The rejection of Claim 1 under 35 U.S.C. § 112 is based on the usage of "each component." In the first instance, the language is "each component of the local rank vector." In the second instance, the language is "each component of the block rank vector." This language is not indefinite because vectors inherently have components.

The rejection of Claim 11 under 35 U.S.C. § 112 is based on the variable "K." When a database is partitioned into subsets, there will necessarily be some number of subsets. This number of subsets is K. The language of the claim now makes this more clear.

The rejection of Claim 27 under 35 U.S.C. § 112 is based on the phrase "according to a classification of the nodes." Applicant disagrees with the Examiner – partitioning items based on a classification of the items is a concept understandable to those of ordinary skill in the art of computer science. Two dependent claims (29, 30) have been added that are

directed to more specific types of classification. Claims 23-26 also are directed to specific types of classification of nodes.

Detailed Response to 35 U.S.C. 101

Independent claims 1, 11, and 27 were rejected under 35 U.S.C. § 101 for being directed to non-statutory subject matter. These claims address a method of ranking documents in a linked database, the same objective addressed by Page in U.S. Pat. No. 6,285,999. These three claims have been amended to clarify that the results of the ranking are stored. Documents in a linked database are tangible, and knowing the rank for a particular document in a linked database is valuable for later searching of relevant documents. In the language of State Street Bank & Trust Co. v. Signature Financial Group, Inc., 149 F.3d, 1368, 1373 (Fed. Cir. 1998), the method of the claims here is a “transformation of data … through a series of mathematical calculations” and produces a “useful, concrete and tangible result.” As amended the claims are thus patentable.

The resolution of the § 101 rejection for independent claims 1, 11, and 27 also resolves the rejection for dependent claims 2-10, 12-26, and 28-30.

Detailed Response to 35 U.S.C. 103

The Examiner has also rejected the claims of this application under 35 U.S.C. § 103, primarily based on Page (U.S. Pat. No. 6,285,999) and Kleinberg (U.S. Pat. No. 6,112,202), both of which were disclosed by applicant in an Information Disclosure Statement. Although Page determines node ranks, it only determines global ranks of documents in a linked database. Each of the claims in this application includes local ranks and/or block ranks. Neither of these concepts was disclosed or suggested in the Page patent.

For example, the examiner cited Page, fig. 3, item 105 as disclosing “obtaining a local rank vector associated with a selected subset of nodes in the linked database, wherein each component of the local rank vector represents a local rank of a node in the selected subset of nodes.” Item 105 in Page is $r[k]$, the rank of a single node. But this is not a local rank. Page discusses only global ranks, and $r[k]$ is the global rank of a single node. Similarly, Page, col. 3, lines 56 – 66 and col. 6, lines 15 – 33 discusses only the concept of a global transition matrix. There is no “local rank vector associated with a selected subset of nodes.”

Similarly, Page does not disclose or suggest “obtaining a block rank vector associated with the linked database, wherein each component of the block rank vector represents a block rank of a subset of nodes in the linked database.” The lines cited by the Examiner (col. 5, lines 15 – 35 and 60 – 67; col. 6, lines 50 – 67) disclose only looking at a single node, performing a finite number of iterations, or the use of a damping factor. None of these citations disclose or suggest “obtaining a block rank vector.”

With respect to Kleinberg, it is noted that while Kleinberg teaches partitioning a set of nodes or entities, Kleinberg does not teach the computation of a block rank vector, which would rank the partitioned sets as sets or blocks. Since neither Kleinberg nor Page teaches the computation of a block rank vector, the combination of these references do not teach or suggest all the elements of the pending claims. Furthermore, neither Kleinberg nor Page (nor any logical combination thereof) teaches the computation of both a block rank vector and local ranks, and then combining these to produce global ranks for individual nodes.

For these reasons, applicants respectfully submit that the cited prior art, alone, or in combination, do not disclose or suggest local ranks or block ranks, and therefore the claims of this application are patentable.

CONCLUSION

In light of the above amendments and remarks, the Applicant respectfully requests that the Examiner reconsider this application with a view towards allowance. The Examiner is invited to call the undersigned attorney at (650) 843-7501, if a telephone call could help resolve any remaining items.

Respectfully submitted,

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